REMARKS/ARGUMENTS

Objection to the Drawings

The drawings are objected to as failing to comply with 37 C.F.R. § 1.84(p)(5) including a reference numeral that is not mentioned in the description. Applicant submits a proposed drawing change to FIGURE 2 which shows the drawing change in red. The proposed drawing change deletes reference numeral "209" from FIGURE 2. Applicant will submit corrected formal drawings upon receipt of a notice of allowance. Accordingly, Applicant respectfully requests the Examiner to withdraw the objection to the drawings.

Rejection under 35 U.S.C. § 102(b)

Claims 1, 2, 6-8, 12-15, 19, and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,940,049 to Hinman et al. (hereinafter Hinman).

Applicant has amended independent claims 1, 8, and 14. The amendment is supported by the specification on, inter alia, page 6, line 24 through page 7, line 6. No new matter has been entered.

It is well-settled that to anticipate a claim, the reference must teach every element of the claim. *See* M.P.E.P. § 2131. Also, "[t]he identical invention must be shown in as complete detail as is contained in the...claim." *See* M.P.E.P. § 2131, citing *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

As amended, claim 1 recites, in part:

a central processing unit (CPU) to process said digital information before receipt by said video subsystem, wherein said CPU is operable to determine a background color of said document and is operable to replace said background color with a replacement color to optimize visual contrast between text in said document and said replacement color.

As amended, claim 8 recites, in part:

processing said digital image representation to enhance readability of said digital image representation for overhead projection, wherein said processing comprises determining a background color of said document and replacing said background

color with a replacement color to optimize visual contrast between text in said document and said replacement color.

As amended, claim 14 recites, in part:

> means for digitally enhancing said digital information to enhance readability of an overhead image, wherein said means for digitally enhancing is operable to determine a background color of said document and is operable to replace said background color with a replacement color to optimize visual contrast between text in said document and said replacement color.

The Examiner admits that Hinman "does not necessarily teach that the CPU is operable to modify a color range of the digital information, and/or able to increase contrast, and/or perform edge enhancement of the digital information." Office Action, page 4. Accordingly, claims 1, 8, and 14 comprise limitations that are not disclosed by Hinman. Therefore, claims 1, 8, and 14 are not anticipated by Hinman. Claims 6, 7, 12, 13, 15, 19, and 20 respectively depend from base claims 1, 8, and 14 and, hence, inherit all limitations of their respective base claim. Therefore, claims 6, 7, 12, 13, 15, 19, and 20 are also not anticipated.

Applicant notes that claim 2 has been cancelled without prejudice. Accordingly, the Examiner's rejection of claim 2 and Applicant's traverse thereof is now moot.

Rejection under 35 U.S.C. § 103(a)

Claims 3-5, 9-11, and 16-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hinman.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. *See* M.P.E.P. § 2143. Without conceding the third criteria, Applicant asserts that the cited art does not satisfy the third criteria.

As amended, claim 1 recites, in part:

a central processing unit (CPU) to process said digital information before receipt by said video subsystem, wherein said CPU is operable to determine a background color of said document and is operable to replace said background color with a replacement color to optimize visual contrast between text in said document and said replacement color.

As amended, claim 8 recites, in part:

processing said digital image representation to enhance readability of said digital image representation for overhead projection, wherein said processing comprises determining a background color of said document and replacing said background color with a replacement color to optimize visual contrast between text in said document and said replacement color.

As amended, claim 14 recites, in part:

means for digitally enhancing said digital information to enhance readability of an overhead image, wherein said means for digitally enhancing is operable to determine a background color of said document and is operable to replace said background color with a replacement color to optimize visual contrast between text in said document and said replacement color.

The Examiner admits that Hinman "does not necessarily teach that the CPU is operable to modify a color range of the digital information." Office Action, page 4. The Examiner attempts to address the lack of teaching by observing that Hinman discloses a means for modifying the image to correct for lens aberrations and presumably other errors. *Id.* With respect to image processing to correct lens aberrations, Hinman actually teaches that its system applies a digital FIR sharpening filter. It is respectfully asserted that the disclosed digital FIR sharpening filter of Hinman merely corrects spatial aberrations due to the variation in focal length along the radius of curvature of the focusing lens. Thus, the digital FIR sharpening filter does not provide any processing of the digital image with respect to the chromatic components of a digital image.

In regard to the Examiner's assertion that the means for modifying could correct "presumably other errors" including "the ability to change the color range," it is respectfully submitted that this observation is insufficient to teach or suggest the claimed subject matter. Specifically, it has been held that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the

desirability of the combination. *See* M.P.E.P. § 2143.01, citing *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990). Moreover, the fact that the computer 18 of Hinman could be programmed to modify a color range does not mean that Hinman suggests that the computer 18 of Hinman should be programmed to determine a background color of the document and to replace the background color with a replacement color to optimize visual contrast between text in the document and the replacement color.

The Examiner further states "the ability to change the color range" was commonly performed by "graphics related application software," "modern copiers," and "digital image editing software." Office Action, page 4. Also, the Examiner states that "it was also common to change a color digital image into a monochrome one." *Id.* Applicant believes that the Examiner has either relied on his own personal knowledge, or taken Official Notice, with respect to this matter. Under Rule 37 C.F.R. §1.104(d)(2), the Examiner is hereby requested to provide and make of record an affidavit setting forth his data as specifically as possible for the assertion. Alternatively, under M.P.E.P. §2144.03, the Examiner is hereby requested to cite a reference in support of the assertion. Otherwise the rejection should be withdrawn.

Moreover, as amended, claims 1, 8, and 14 do not merely recite changing a color range or converting to a monochrome image. Instead, claims 1, 8, and 14 require determining the background color of the document and replacing the background color with a replacement color to optimize visual contrast between text in the document and the replacement color.

Thus, the cited art does not teach or suggest each and every limitation of claims 1, 8, and 14. Therefore, a prima facie case of obviousness has not been established for claims 1, 8, and 14. Claims 5, 11, and 18 respectively depend from base claims 1, 8, and 14 and, hence, inherit all limitations of their respective base claim. A prima facie case of obviousness has not been established for claims 5, 11, and 18.

Applicant notes that claims 3, 4, 9, 10, 16, and 17 have been cancelled without prejudice. Therefore, the Examiner's rejection of these claims and Applicant's traverse thereof is now moot.

Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-2025, under Order No. 10008276-1 from which the undersigned is authorized to draw.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.
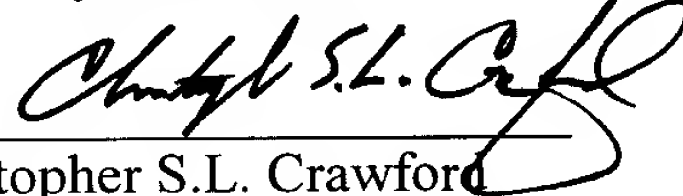
Date of Deposit: October 4, 2002

Typed Name: Kristin Mattern

Signature: _____

Respectfully submitted,

By_____

Christopher S.L. Crawford
Attorney/Agent for Applicant
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Date: October 4, 2002
Telephone No. (214) 855-8186

Version With Markings to Show Changes Made

Please amend claims 1, 5-8, and 14 and cancel claims 2-4, 9, 10, 16, and 17 as follows:

1.   (Amended)   A system for providing an overhead image, comprising:

a scan region that receives a document containing data to be projected;

an illumination element that illuminates said document to produce image light;

means for capturing and digitizing said image light as digital information; [and]

a video subsystem that produces a projection image from said digital [information.] information; and

a central processing unit (CPU) to process said digital information before receipt by said video subsystem, wherein said CPU is operable to determine a background color of said document and is operable to replace said background color with a replacement color to optimize visual contrast between text in said document and said replacement color.

Claim 2 cancelled without prejudice.

Claim 3 cancelled without prejudice.

Claim 4 cancelled without prejudice.

5.   (Amended)   The system of claim [2] 1 wherein said CPU is operable to perform edge enhancement of said digital information.

6.   (Amended)   The system of claim [2] 1 wherein said CPU is operable to create a printable file utilizing said digital information.

7.   (Amended)   The system of claim [2] 1 wherein said CPU is operable to provide an electronic file of said digital information to an interface.

8.   (Amended)   A method for providing an overhead image, comprising:

illuminating a document placed in a scan region to produce image light;

capturing said image light;

digitizing said image light to produce a digital image representation of said document;

processing said digital image representation to enhance readability of said digital image representation for overhead projection, wherein said processing comprises determining a background color of said document and replacing said background color with a replacement color to optimize visual contrast between text in said document and said replacement color; and

driving a video subsystem with said processed digital image representation to project said overhead image.

Claim 9 cancelled without prejudice.

Claim 10 cancelled without prejudice.

14.   (Amended)   A system for providing an overhead image projection, comprising:

an illumination subsystem to illuminate a document to produce image light;

means for capturing and digitizing said image light to produce digital information;

memory for storing said digital information;

means for digitally enhancing said digital information to enhance readability of an overhead image, wherein said means for digitally enhancing is operable to determine a background color of said document and is operable to replace said background color with a replacement color to optimize visual contrast between text in said document and said replacement color; and

a video subsystem operable to project said overhead image utilizing said [processed] enhanced digital information.

Claim 16 cancelled without prejudice.
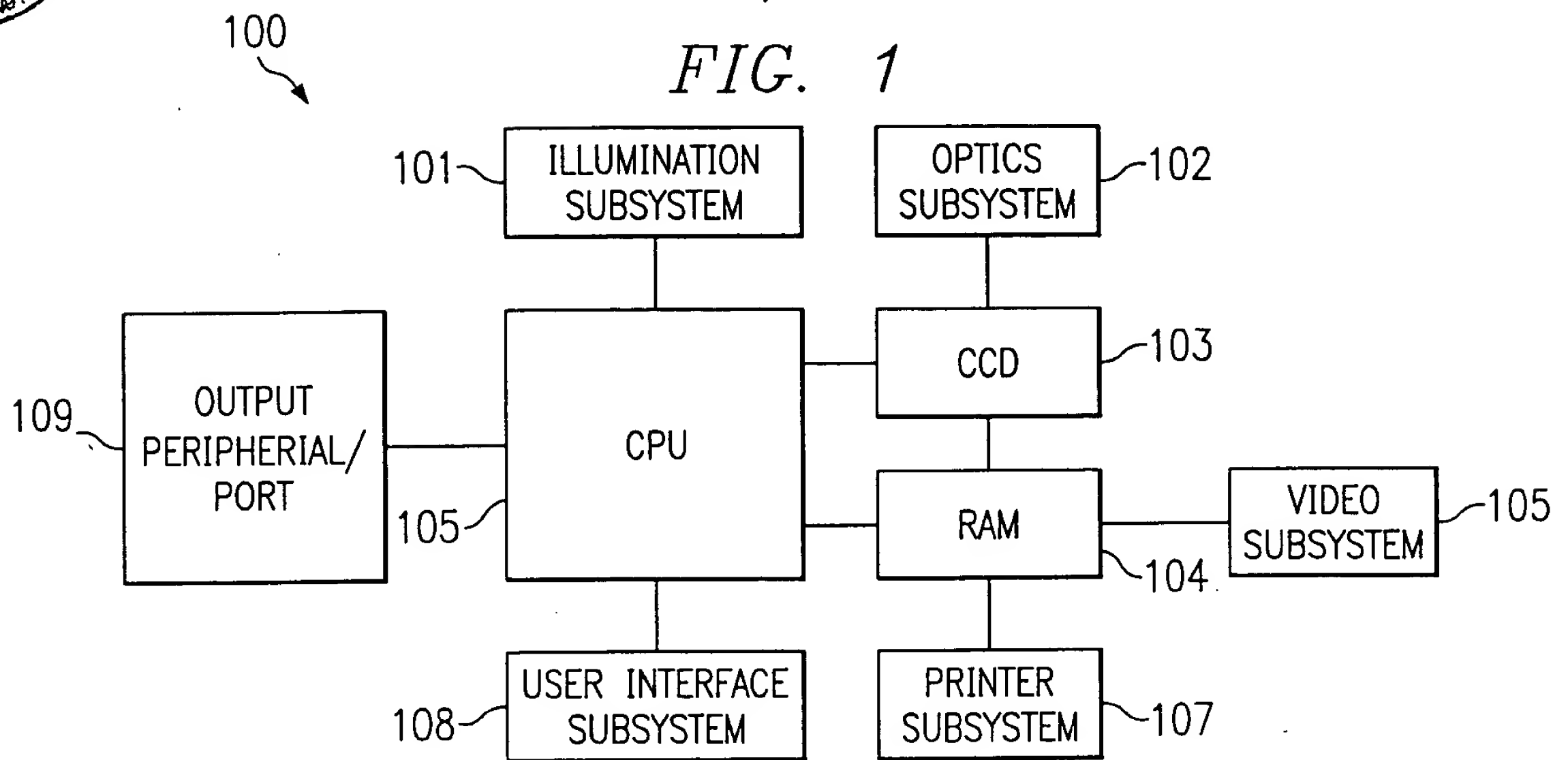

Claim 17 cancelled without prejudice.

FIG. 1

- 101 ILLUMINATION SUBSYSTEM
- 102 OPTICS SUBSYSTEM
- 103 CCD
- 109 OUTPUT PERIPHERIAL/PORT
- 105 CPU
- 104 RAM
- 105 VIDEO SUBSYSTEM
- 108 USER INTERFACE SUBSYSTEM
- 107 PRINTER SUBSYSTEM
- 100

FIG. 2